General

Guideline Title

Primary care interventions to prevent tobacco use in children and adolescents: U.S. Preventive Services Task Force recommendation statement.

Bibliographic Source(s)

U.S. Preventive Services Task Force. Primary care interventions to prevent tobacco use in children and adolescents: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med. 2013 Oct 15;159(8):552-7. [11 references] PubMed

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: U.S. Preventive Services Task Force (USPSTF). Counseling to prevent tobacco use and tobacco-caused disease: recommendation statement. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2003 Nov. 13 p.

Recommendations

Major Recommendations

The U.S. Preventive Services Task Force (USPSTF) grades its recommendations (A, B, C, D, or I) and identifies the levels of certainty regarding net benefit (High, Moderate, and Low). The definitions of these grades can be found at the end of the "Major Recommendations" field.

The USPSTF recommends that primary care clinicians provide interventions, including education or brief counseling, to prevent initiation of tobacco use in school-aged children and adolescents. (B recommendation)

Clinical Considerations

Patient Population Under Consideration

This recommendation applies to school-aged children and adolescents. The USPSTF has issued a separate recommendation statement on tobacco use counseling in adults and pregnant women.

Assessment of Risk

In 2009, 8.2% of middle school students and 23.9% of high school students reported current use of any tobacco product. Although younger children may be susceptible to smoking, research indicates that adolescents may be especially vulnerable to nicotine addiction.

The prevalence of current smoking in the United States is higher in male high school students (19.8%) than female students (19.1%). Two of the strongest factors associated with smoking initiation in children and adolescents are parental smoking and parental nicotine dependence. Other factors include low levels of parental monitoring, easy access to cigarettes, the perception that peers smoke, and exposure to tobacco promotions.

Interventions to Prevent Tobacco Use

The type and intensity of effective behavioral interventions substantially varied in the evidence review, ranging from no in-person interaction with a health care professional to 7 group sessions totaling more than 15 hours. In 1 intervention, families received a packet of materials for parents and children and a 28-minute video with a viewing guide. These families received 1 counseling call 3 to 6 weeks after receiving the written materials and another call 14 months after enrollment. Another intervention consisted of creating a tobacco-free office and giving patients a series of antitobacco messages on preprinted "prescription" forms. The most intensive intervention focused on universal substance abuse and problem behavior prevention for families. In this intervention, the youth and at least 1 parent participated in 7 group and family sessions over 7 weeks (each session lasted 2 to 2.5 hours) and received workbooks with activities to complete at home.

Even very minimal interventions, such as mailing materials to a youth's home, had substantial effects on reducing smoking initiation. One intervention mailed tailored newsletters addressed to the student every 3 weeks; another intervention sent age-related materials 4 times over 12 months. In a third intervention, participants were mailed 5 core activity guides with newsletters and tip sheets approximately every 2 weeks, with 1 booster guide at 1 year.

Many interventions had similar content, such as the participant's attitudes, beliefs, and knowledge about smoking; the consequences of smoking; the influence of the social environment, including tobacco marketing; and skills to decline cigarettes. Several interventions targeted parental attitudes and beliefs about smoking and parent–child communication.

Interventions for Tobacco Cessation

Evidence on the effectiveness of cessation interventions delivered in primary care settings to school-aged children and adolescents who have experimented with smoking or are regular smokers is limited. The USPSTF examined the evidence on behavioral interventions to promote smoking cessation in children and adolescents who were classified as smokers. Few studies targeted regular, established smokers or stratified findings by length or amount of smoking (such as experimenters vs. established smokers). A pooled meta-analysis of 7 trials, which included 2328 children and adolescents and examined interventions to promote smoking cessation, found a small but statistically insignificant effect at 6- to 12-month follow-up favoring the intervention (risk ratio, 0.96 [95% confidence interval, 0.90 to 1.02]).

Although evidence on the effectiveness of primary care–relevant interventions in reducing smoking in children and adolescents is limited, some evidence from other literature shows that school- and community-based behavioral counseling programs can promote smoking cessation in adolescent smokers. In a meta-analysis of 64 trials, 40 of which were school-based, Sussman and Sun found a 4–percentage point difference in smoking cessation rates between the intervention and control groups (11.8% vs. 7.5%, respectively). A longitudinal evaluation of 41 community-based programs reported biochemically validated cessation rates similar to those in randomized trials (averaging 14% at the end of the program and 12% at 12-month follow-up).

No medications are currently approved by the U.S. Food and Drug Administration for tobacco cessation in children and adolescents. Two studies that evaluated behavioral interventions plus medication (sustained-release bupropion alone or combined with nicotine replacement therapy) showed no statistically significant benefit from the medication. Evidence on complementary and alternative medicine, such as acupuncture, for smoking cessation in children and adolescents is not available, and such interventions have demonstrated no long-term benefits in adults.

Other Approaches to Prevention and Cessation

The Community Preventive Services Task Force has made the following 4 recommendations for school-aged children and adolescents.

1. Mobile phone–based interventions for tobacco cessation, on the basis of sufficient evidence of their effectiveness in increasing abstinence from tobacco among persons interested in quitting, as well as community-wide, proactive telephone support (proactive follow-up) combined with patient education materials, on the basis of strong evidence of their effectiveness in increasing tobacco cessation in both clinical and community settings. However, the Community Preventive Services Task Force noted that the evidence on the effectiveness of both of these interventions for school-aged children and adolescents is limited.
2. Interventions that increase the price of tobacco products, on the basis of strong evidence of their effectiveness in reducing tobacco use in adolescents and adults, reducing population consumption of tobacco products, and increasing tobacco use cessation.
3. Mass media campaigns, on the basis of strong evidence of their effectiveness in reducing tobacco use in adolescents when combined with increases in tobacco prices, school-based education, and other community education programs.
4. Community mobilization combined with additional interventions (such as stronger local laws directed at retailers, active enforcement of retailer sales laws, and retailer education with reinforcement), on the basis of sufficient evidence of their effectiveness in reducing youth tobacco use and access to tobacco products from commercial sources.

The Community Preventive Services Task Force also recommends provider reminder systems, whether used alone or as part of a multicomponent

intervention, across a range of intervention characteristics (such as chart stickers, checklists, and flowcharts) and in various clinical settings and populations.

Useful Resources

Primary care clinicians may find the following resources useful in talking with children and adolescents about the harms of smoking and other reasons not to start smoking: Centers for Disease Control and Prevention's Smoking & Tobacco Use: Information Sheet (www.cdc.gov/tobacco/youth/information_sheet/index.htm); U.S. Department of Health and Human Services' BeTobaccoFree.gov (http://betobaccofree.hhs.gov/index.html); Public Health Service's (PHS) Treating Tobacco Use and Dependence: 2008 Update (www.ncbi.nlm.nih.gov/books/NBK63952/); and American Academy of Pediatrics' Tobacco Prevention Policy Tool (www2.aap.org/richmondcenter/TobaccoPreventionPolicyTool/TPPT_PracticeCessation.html). The USPSTF recommends that clinicians ask all adults about tobacco use and provide tobacco cessation interventions for those who use tobacco products (A recommendation). It also recommends that clinicians ask all pregnant women about tobacco use and provide augmented, pregnancy-tailored counseling for those who smoke (A recommendation).

Definitions:

What the U.S. Preventive Services Task Force (USPSTF) Grades Mean and Suggestions for Practice

Grade	Grade Definitions	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer/provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer/provide this service.
C	The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.	Offer/provide this service only if other considerations support offering or providing the service in an individual patient.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be measured.	Read "Clinical Considerations" section of USPSTF Recommendation Statement (see the "Major Recommendations" field). If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

USPSTF Levels of Certainty Regarding Net Benefit

Definition: The USPSTF defines *certainty* as "likelihood that the USPSTF assessment of the net benefit of a preventive service is correct." The net benefit is defined as benefit minus harm of the preventive service as implemented in a general, primary care population. The USPSTF assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.

Level of Certainty	Description
High	The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies.
Moderate	The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by factors such as: • The number, size, or quality of individual studies • Inconsistency of findings across individual studies • Limited generalizability of findings to routine primary care practice; and • Lack of coherence in the chain of evidence

Level of Certainty	Description
	As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.
Low	The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of: • The limited number or size of studies • Important flaws in study design or methods • Inconsistency of findings across individual studies • Gaps in the chain of evidence • Findings not generalizable to routine primary care practice; and • A lack of information on important health outcomes More information may allow an estimation of effects on health outcomes.

Clinical Algorithm(s)

None available

Scope

Disease/Condition(s)

Nicotine dependence

Guideline Category

Counseling

Prevention

Screening

Treatment

Clinical Specialty

Family Practice

Pediatrics

Preventive Medicine

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Nurses

Physician Assistants

Physicians

Public Health Departments

Guideline Objective(s)

- To summarize the U.S. Preventive Services Task Force (USPSTF) recommendations on primary care interventions to prevent tobacco use in children and adolescents
- To update the 2003 recommendation statement *Counseling to prevent tobacco use and tobacco-caused disease*

Target Population

School-aged children and adolescents seen in primary care settings

Interventions and Practices Considered

Behavioral counseling interventions to prevent tobacco use in school-aged children and adolescents

- Face-to-face or phone interaction
- Print materials
- Computer applications

Major Outcomes Considered

- Key Question 1: Do primary care interventions designed to prevent tobacco use or improve tobacco cessation rates in children and adolescents improve health outcomes in children and adolescents (respiratory health and dental/oral health) and reduce the likelihood of adult smoking?
- Key Question 2: Do primary care interventions prevent tobacco use in children and adolescents or improve tobacco cessation rates in children and adolescents who use tobacco? What are elements of efficacious interventions? Are there differences in outcomes in different subgroups, as defined by age, sex, race, socioeconomic status, type or pattern of tobacco use, residential setting (urban vs. rural), or presence of depression?
- Key Question 3: What adverse effects are associated with interventions to improve tobacco cessation rates or prevent tobacco use in children and adolescents?

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Note from the National Guideline Clearinghouse (NGC): A systematic evidence review was prepared by the Oregon Evidence-based Practice Center (EPC), Center for Health Research, Kaiser Permanente Northwest for the U.S. Preventive Services Task Force (USPSTF) (see the "Availability of Companion Documents" field).

Data Sources and Searches

EPC staff began by evaluating all trials included in the 2008 Public Health Service Clinical Practice Guideline on Treating Tobacco Use and Dependence report for possible inclusion. In addition they evaluated all trials that were considered by 3 previous reviews that collectively covered the prevention literature through July 2002 and the cessation literature through August 2009. They then searched MEDLINE, PsycINFO, the Cochrane Central Register of Controlled Trials, and the Database of Abstracts of Reviews of Effects through 14 September 2012.

Study Selection

Two investigators independently reviewed abstracts against prespecified inclusion and exclusion criteria; potentially included full-text articles were subsequently dually reviewed for inclusion. The EPC staff included trials of interventions designed to prevent tobacco use or promote cessation (with or without the use of medication) that were published during or after 1980. They included interventions that targeted children, their parents, or both and were conducted in or potentially feasible for (or referable from) health care settings. They described these collectively as "primary care–relevant." Referable interventions are those that are not conducted within primary care itself but that patients could enroll in within the larger health care setting or community. Included trials had control groups that offered minimal or no treatment and had to report tobacco use prevalence or a similar outcome at least 6 months after baseline. The EPC staff included studies that reported harms at any follow-up time point. They only considered controlled trials for questions related to benefits of treatment; observational studies were included for medication harms.

Number of Source Documents

- Key Question 1: 0 articles
- Key Question 2: 23 articles (18 trials)
- Key Question 3: 24 articles (19 trials)

Methods Used to Assess the Quality and Strength of the Evidence

Expert Consensus

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Two independent investigators conducted quality assessments of all trials meeting the inclusion criteria, resulting in a rating of good, fair, or poor (see Appendix F of the Evidence Synthesis [see the "Availability of Companion Documents" field] for quality criteria).

Methods Used to Analyze the Evidence

Meta-Analysis of Randomized Controlled Trials

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Note from the National Guideline Clearinghouse (NGC): A systematic evidence review was prepared by the Oregon Evidence-based Practice Center (EPC), Center for Health Research, Kaiser Permanente Northwest for the U.S. Preventive Services Task Force (USPSTF) (see the "Availability of Companion Documents" field).

Data Extraction and Quality Assessment

Two independent investigators conducted quality assessments of all included trials, resulting in a rating of "good," "fair," or "poor" according to USPSTF methods. The EPC staff assessed the validity of the randomization and measurement procedures, comparability of the groups at baseline, overall and group-specific attrition, intervention fidelity, and appropriateness of statistical methods. They excluded poor-quality trials. All trials meeting quality criteria for benefits of treatment were also examined for harms. One reviewer abstracted data from studies that were rated as fair or good, and all abstraction was checked for accuracy and completeness by another reviewer. Discrepancies were resolved by double-checking the article and through discussion.

Data Synthesis and Analysis

Using smoking status as the primary outcome, the EPC staff critically examined results tables with important study characteristics to identify the

range of results and potential associations with effect size. Measures of self-reported smoking were relied on because biochemical verification was not reported or used consistently. Studies were grouped according to the outcomes presented: prevalence of smoking among baseline nonsmokers and smokers (combined), smoking initiation among baseline nonsmokers (prevention), or continued smoking among baseline smokers (cessation). Behavior-based and medication trials were examined separately. Within each group, the EPC staff qualitatively explored patterns of association between effect size and several intervention and study design characteristics, including the number and duration of intervention sessions, whether the intervention was tailored according to smoking status, whether there was a group component or motivational interviewing, the measure of tobacco use, and the average age of the participants. The full report outlines the complete list of factors examined (see the Evidence Synthesis [see the "Availability of Companion Documents" field]).

Random-effects meta-analyses were conducted to estimate the effect size of interventions for trials reporting sufficient data. The EPC staff entered the raw number of smokers and the total number of participants in the analysis to calculate pooled risk ratio (RR) estimates by using Stata, version 11.2 (StataCorp, College Station, Texas). The meta-analysis was adjusted for the cluster randomization of 3 trials by dividing the sample sizes in these studies by a design effect based on average cluster size and an estimated intraclass correlation. Statistical analyses for small study effects (an indicator of publication bias) were not conducted because there were fewer than 10 trials in all analyses. Statistical heterogeneity was assessed with the I^2 statistic (20).

Methods Used to Formulate the Recommendations

Balance Sheets

Expert Consensus

Description of Methods Used to Formulate the Recommendations

The U.S. Preventive Services Task Force (USPSTF) systematically reviews the evidence concerning both the benefits and harms of widespread implementation of a preventive service. It then assesses the certainty of the evidence and the magnitude of the benefits and harms. On the basis of this assessment, the USPSTF assigns a letter grade to each preventive service signifying its recommendation about provision of the service (see table below). An important, but often challenging, step is determining the balance between benefits and harms to estimate "net benefit" (that is, benefits minus harms).

Table 1. U.S. Preventive Services Task Force Recommendation Grid*

Certainty of Net Benefit	Magnitude of Net Benefit			
	Substantial	**Moderate**	**Small**	**Zero/Negative**
High	A	B	C	D
Moderate	B	B	C	D
Low	Insufficient			

**A, B, C, D*, and *I (Insufficient)* represent the letter grades of recommendation or statement of insufficient evidence assigned by the U.S. Preventive Services Task Force after assessing certainty and magnitude of net benefit of the service (see the "Rating Scheme for the Strength of the Recommendations" field).

The overarching question that the Task Force seeks to answer for every preventive service is whether evidence suggests that provision of the service would improve health outcomes if implemented in a general primary care population. For screening topics, this standard could be met by a large randomized, controlled trial (RCT) in a representative asymptomatic population with follow-up of all members of both the group "invited for screening" and the group "not invited for screening."

Direct RCT evidence about screening is often unavailable, so the Task Force considers indirect evidence. To guide its selection of indirect evidence, the Task Force constructs a "chain of evidence" within an analytic framework. For each key question, the body of pertinent literature is critically appraised, focusing on the following 6 questions:

1. Do the studies have the appropriate research design to answer the key question(s)?
2. To what extent are the existing studies of high quality? (i.e., what is the internal validity?)

3. To what extent are the results of the studies generalizable to the general U.S. primary care population and situation? (i.e., what is the external validity?)
4. How many studies have been conducted that address the key question(s)? How large are the studies? (i.e., what is the precision of the evidence?)
5. How consistent are the results of the studies?
6. Are there additional factors that assist the USPSTF in drawing conclusions (e.g., presence or absence of dose–response effects, fit within a biologic model)?

The next step in the Task Force process is to use the evidence from the key questions to assess whether there would be net benefit if the service were implemented. In 2001, the USPSTF published an article that documented its systematic processes of evidence evaluation and recommendation development. At that time, the Task Force's overall assessment of evidence was described as good, fair, or poor. The Task Force realized that this rating seemed to apply only to how well studies were conducted and did not fully capture all of the issues that go into an overall assessment of the evidence about net benefit. To avoid confusion, the Task Force has changed its terminology. Whereas individual study quality will continue to be characterized as good, fair, or poor, the term certainty will now be used to describe the Task Force's assessment of the overall body of evidence about net benefit of a preventive service and the likelihood that the assessment is correct. Certainty will be determined by considering all 6 questions listed above; the judgment about certainty will be described as high, moderate, or low.

In making its assessment of certainty about net benefit, the evaluation of the evidence from each key question plays a primary role. It is important to note that the Task Force makes recommendations for real-world medical practice in the United States and must determine to what extent the evidence for each key question—even evidence from screening RCTs or treatment RCTs—can be applied to the general primary care population. Frequently, studies are conducted in highly selected populations under special conditions. The Task Force must consider differences between the general primary care population and the populations studied in RCTs and make judgments about the likelihood of observing the same effect in actual practice.

It is also important to note that one of the key questions in the analytic framework refers to the potential harms of the preventive service. The Task Force considers the evidence about the benefits and harms of preventive services separately and equally. Data about harms are often obtained from observational studies because harms observed in RCTs may not be representative of those found in usual practice and because some harms are not completely measured and reported in RCTs.

Putting the body of evidence for all key questions together as a chain, the Task Force assesses the certainty of net benefit of a preventive service by asking the 6 major questions listed above. The Task Force would rate a body of convincing evidence about the benefits of a service that, for example, derives from several RCTs of screening in which the estimate of benefits can be generalized to the general primary care population as "high" certainty (see the "Rating Scheme for the Strength of the Recommendations" field). The Task Force would rate a body of evidence that was not clearly applicable to general practice or has other defects in quality, research design, or consistency of studies as "moderate" certainty. Certainty is "low" when, for example, there are gaps in the evidence linking parts of the analytic framework, when evidence to determine the harms of treatment is unavailable, or when evidence about the benefits of treatment is insufficient. Table 4 in the methodology document listed below (see the "Availability of Companion Documents" field) summarizes the current terminology used by the Task Force to describe the critical assessment of evidence at all 3 levels: individual studies, key questions, and overall certainty of net benefit of the preventive service.

Sawaya GF et al. Update on the methods of the U.S. Preventive Services Task Force: estimating certainty and magnitude of net benefit. Ann Intern Med. 2007;147:871-875. [5 references].

Rating Scheme for the Strength of the Recommendations

What the U.S. Preventive Services Task Force (USPSTF) Grades Mean and Suggestions for Practice

Grade	Grade Definitions	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer/provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer/provide this service.
C	The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty	Offer/provide this service only if other considerations support offering or providing the service in an individual patient.

Grade	Grade Definitions	Suggestions for Practice
	that the net benefit is small.	
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be measured.	Read "Clinical Considerations" section of USPSTF Recommendation Statement (see the "Major Recommendations" field). If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

USPSTF Levels of Certainty Regarding Net Benefit

Definition: The USPSTF defines *certainty* as "likelihood that the USPSTF assessment of the net benefit of a preventive service is correct." The net benefit is defined as benefit minus harm of the preventive service as implemented in a general, primary care population. The USPSTF assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.

Level of Certainty	Description
High	The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies.
Moderate	The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by factors such as: • The number, size, or quality of individual studies • Inconsistency of findings across individual studies • Limited generalizability of findings to routine primary care practice; and • Lack of coherence in the chain of evidence As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.
Low	The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of: • The limited number or size of studies • Important flaws in study design or methods • Inconsistency of findings across individual studies • Gaps in the chain of evidence • Findings not generalizable to routine primary care practice; and • A lack of information on important health outcomes More information may allow an estimation of effects on health outcomes.

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Comparison with Guidelines from Other Groups

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

Peer Review. Before the U.S. Preventive Services Task Force (USPSTF) makes its final determinations about recommendations on a given preventive service, the Evidence-based Practice Center and the Agency for Healthcare Research and Quality send a draft evidence review to 4 to 6 external experts and to Federal agencies and professional and disease-based health organizations with interests in the topic. The experts are asked to examine the review critically for accuracy and completeness and to respond to a series of specific questions about the document. After assembling these external review comments and documenting the proposed response to key comments, the topic team presents this information to the USPSTF in memo form. In this way, the USPSTF can consider these external comments before it votes on its recommendations about the service. Draft recommendation statements are then circulated for comment among reviewers representing professional societies, voluntary organizations, and Federal agencies, as well as posted on the Task Force Web site for public comment. These comments are discussed before the final recommendations are confirmed.

Response to Public Comment. A draft version of this recommendation statement was posted for public comment on the USPSTF Web site from 11 December 2012 to 7 January 2013. Most comments agreed with the recommendation statement. In response to several comments requesting clarification, the USPSTF revised the title to reflect that the USPSTF considered primary care–relevant interventions, clarified that it searched for evidence on other forms of tobacco use but only found evidence on cigarette smoking, enhanced the section on research gaps, and provided resources for primary care clinicians to help prevent tobacco use in children and adolescents.

Comparison with Guidelines from Other Groups. Recommendations for screening from the following groups were discussed: the U.S. Public Health Service (PHS) and the American Academy of Pediatrics (AAP).

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is not specifically stated for each recommendation.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Effectiveness of Interventions to Change Behavior

The U.S. Preventive Services Task Force (USPSTF) found adequate evidence that behavioral counseling interventions, such as face-to-face or phone interaction with a health care provider, print materials, and computer applications, can reduce the risk for smoking initiation in school-aged children and adolescents.

Potential Harms

Harms of Interventions to Change Behavior

The U.S. Preventive Services Task Force (USPSTF) found no evidence on the harms of behavioral interventions to prevent tobacco use; however, it believes that the magnitude of these potential harms is probably small to none.

Qualifying Statements

Qualifying Statements

- The U.S. Preventive Services Task Force (USPSTF) makes recommendations about the effectiveness of specific clinical preventive services for patients without related signs or symptoms.
- It bases its recommendations on the evidence of both the benefits and harms of the service and an assessment of the balance. The USPSTF does not consider the costs of providing a service in this assessment.

- The USPSTF recognizes that clinical decisions involve more considerations than evidence alone. Clinicians should understand the evidence but individualize decision making to the specific patient or situation. Similarly, the USPSTF notes that policy and coverage decisions involve considerations in addition to the evidence of clinical benefits and harms.
- Recommendations made by the USPSTF are independent of the U.S. government. They should not be construed as an official position of the Agency for Healthcare Research and Quality or the U.S. Department of Health and Human Services.

Implementation of the Guideline

Description of Implementation Strategy

The experiences of the first and second U.S. Preventive Services Task Force (USPSTF), as well as that of other evidence-based guideline efforts, have highlighted the importance of identifying effective ways to implement clinical recommendations. Practice guidelines are relatively weak tools for changing clinical practice when used in isolation. To effect change, guidelines must be coupled with strategies to improve their acceptance and feasibility. Such strategies include enlisting the support of local opinion leaders, using reminder systems for clinicians and patients, adopting standing orders, and audit and feedback of information to clinicians about their compliance with recommended practice.

In the case of preventive services guidelines, implementation needs to go beyond traditional dissemination and promotion efforts to recognize the added patient and clinician barriers that affect preventive care. These include clinicians' ambivalence about whether preventive medicine is part of their job, the psychological and practical challenges that patients face in changing behaviors, lack of access to health care or of insurance coverage for preventive services for some patients, competing pressures within the context of shorter office visits, and the lack of organized systems in most practices to ensure the delivery of recommended preventive care.

Dissemination strategies have changed dramatically in this age of electronic information. While recognizing the continuing value of journals and other print formats for dissemination, the USPSTF Task Force will make all its products available through its Web site . The combination of electronic access and extensive material in the public domain should make it easier for a broad audience of users to access USPSTF materials and adapt them for their local needs. Online access to USPSTF products also opens up new possibilities for the appearance of the annual, pocket-size Guide to Clinical Preventive Services.

To be successful, approaches for implementing prevention have to be tailored to the local level and deal with the specific barriers at a given site, typically requiring the redesign of systems of care. Such a systems approach to prevention has had notable success in established staff-model health maintenance organizations, by addressing organization of care, emphasizing a philosophy of prevention, and altering the training and incentives for clinicians. Staff-model plans also benefit from integrated information systems that can track the use of needed services and generate automatic reminders aimed at patients and clinicians, some of the most consistently successful interventions. Information systems remain a major challenge for individual clinicians' offices, however, as well as for looser affiliations of practices in network-model managed care and independent practice associations, where data on patient visits, referrals, and test results are not always centralized.

Implementation Tools

Mobile Device Resources

Patient Resources

Pocket Guide/Reference Cards

Staff Training/Competency Material

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

U.S. Preventive Services Task Force. Primary care interventions to prevent tobacco use in children and adolescents: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med. 2013 Oct 15;159(8):552-7. [11 references] PubMed

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

1996 (revised 2013 Oct 15)

Guideline Developer(s)

U.S. Preventive Services Task Force - Independent Expert Panel

Guideline Developer Comment

The U.S. Preventive Services Task Force (USPSTF) is a federally-appointed panel of independent experts. Conclusions of the USPSTF do not necessarily reflect policy of the U.S. Department of Health and Human Services (DHHS) or its agencies.

Source(s) of Funding

The U.S. Preventive Services Task Force (USPSTF) is an independent, voluntary body. The U.S. Congress mandates that the Agency for Healthcare Research and Quality support the operations of the USPSTF.

Guideline Committee

U.S. Preventive Services Task Force (USPSTF)

Composition of Group That Authored the Guideline

*Task Force Members**: Virginia A. Moyer, MD, MPH (*Chair*) (American Board of Pediatrics, Chapel Hill, North Carolina); Michael L. LeFevre, MD, MSPH (*Co-Vice Chair*) (University of Missouri School of Medicine, Columbia, Missouri); Albert L. Siu, MD, MSPH (*Co-Vice Chair*) (Mount Sinai School of Medicine, New York, and James J. Peters Veterans Affairs Medical Center, Bronx, New York); Linda Ciofu

Baumann, PhD, RN (University of Wisconsin, Madison, Wisconsin); Kirsten Bibbins-Domingo, PhD, MD (University of California, San Francisco, San Francisco, California); Susan J. Curry, PhD (University of Iowa College of Public Health, Iowa City, Iowa); Mark Ebell, MD, MS (University of Georgia, Athens, Georgia); Glenn Flores, MD (University of Texas Southwestern, Dallas, Texas); Francisco A.R. García, MD, MPH (Pima County Department of Health, Tucson, Arizona); Adelita Gonzales Cantu, RN, PhD (University of Texas Health Science Center, San Antonio, Texas); David C. Grossman, MD, MPH (Group Health Cooperative, Seattle, Washington); Jessica Herzstein, MD, MPH (Air Products, Allentown, Pennsylvania); Wanda K. Nicholson, MD, MPH, MBA (University of North Carolina School of Medicine, Chapel Hill, North Carolina); Douglas K. Owens, MD, MS (Veterans Affairs Palo Alto Health Care System, Palo Alto, and Stanford University, Stanford, California); William R. Phillips, MD, MPH (University of Washington, Seattle, Washington); and Michael P. Pignone, MD, MPH (University of North Carolina, Chapel Hill, North Carolina)

*Members of the USPSTF at the time this recommendation was finalized. For a list of current Task Force members, go to http://www.uspreventiveservicestaskforce.org/Page/Name/our-members.

Financial Disclosures/Conflicts of Interest

The U.S. Preventive Services Task Force (USPSTF) has an explicit policy concerning conflict of interest. All members disclose at each meeting if they have a significant financial, professional/business, or intellectual conflict for each topic being discussed. USPSTF members with conflicts may be recused from discussing or voting on recommendations about the topic in question.

Potential Conflicts of Interest: Dr. Moyer: *Support for travel to meetings*: AHRQ. Disclosure forms from USPSTF members can be viewed at www.acponline.org/authors/icmje/ConflictOfInterestForms.do?msNum=M13-1537.

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: U.S. Preventive Services Task Force (USPSTF). Counseling to prevent tobacco use and tobacco-caused disease: recommendation statement. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2003 Nov. 13 p.

Guideline Availability

Electronic copies: Available from the Annals of Internal Medicine Web site.

Availability of Companion Documents

The following are available:

Evidence Reviews:

- Patnode CD, O'Connor E, Whitlock EP, Perdue LA, Soh C, Hollis J. Primary care–relevant interventions for tobacco use prevention and cessation in children and adolescents: a systematic evidence review for the U.S. Preventive Services Task Force. Ann Intern Med. 2013;158:253-260.
- Patnode CD, O'Connor E, Whitlock EP, Perdue LA, Soh C, Hollis J. Primary care relevant interventions for tobacco use prevention and cessation in children and adolescents: a systematic evidence review for the U.S. Preventive Services Task Force. Evidence synthesis: No. 97. AHRQ Publication No. 12-05175-EF-1. Rockville (MD): Agency for Healthcare Research and Quality; 2012 Dec. 107 p.

Electronic copies: Available from the U.S. Preventive Services Task Force (USPSTF) Web site.

Background Articles:

- Barton MB et al. How to read the new recommendation statement: methods update from the U.S. Preventive Services Task Force. Ann Intern Med 2007;147:123-127.
- Guirguis-Blake J et al. Refining evidence-based recommendation development. Ann Intern Med 2007;147:117-122.
- Sawaya GF et al. Estimating certainty and magnitude of net benefit. Ann Intern Med 2007;147:871-875.

Electronic copies: Available from the USPSTF Web site.

The following are also available:

- Primary care interventions to prevent tobacco use in children and adolescents. Clinical summary of U.S. Preventive Services Task Force recommendation. Rockville (MD): U.S. Preventive Services Task Force; 2013 Aug. Electronic copies: Available from the USPSTF Web site.
- The guide to clinical preventive services, 2012. Recommendations of the U.S. Preventive Services Task Force. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ), 2012. 128 p. Electronic copies available from the AHRQ Web site. See the related QualityTool summary on the Health Care Innovations Exchange Web site.
- Preventing tobacco use in children and adolescents. CME activity. Available from the Annals of Internal Medicine Web site.

The Electronic Preventive Services Selector (ePSS), is an application designed to provide primary care clinicians and health care teams timely decision support regarding appropriate screening, counseling, and preventive services for their patients. It is based on the current, evidence-based recommendations of the USPSTF and can be searched by specific patient characteristics, such as age, sex, and selected behavioral risk factors.

Patient Resources

The following is available:

- Understanding task force recommendations: primary care interventions to prevent tobacco use in children and adolescents. Consumer fact sheet. Rockville (MD): Agency for Healthcare Research and Quality; 2013 Aug. 3 p. Electronic copies: Available from the U.S. Preventive Services Task Force (USPSTF) Web site.

Print copies: Available from the Agency for Healthcare Research and Quality (AHRQ) Publications Clearinghouse. For more information, go to http://www.ahrq.gov/research/publications/index.html or call 1-800-358-9295 (U.S. only).

Myhealthfinder is a new tool that provides personalized recommendations for clinical preventive services specific to the user's age, gender, and pregnancy status. It features evidence-based recommendations from the USPSTF and is available at www.healthfinder.gov.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

This summary was completed by ECRI on June 30, 1998. The information was verified by the guideline developer on December 1, 1998. This summary was updated by ECRI on November 12, 2003. The information was verified by the guideline developer on November 13, 2003. This summary was updated by ECRI Institute on November 6, 2007, following the U.S. Food and Drug Administration advisory on Antidepressant drugs. This NGC summary was updated by ECRI Institute on November 13, 2013. The updated information was verified by the guideline developer on November 25, 2013.

Copyright Statement

Disclaimer

NGC Disclaimer

The National Guideline Clearinghouseâ„¢ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria.

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.